AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claim 1 (original): A method for treating pain in an individual which comprises administering an analgesic effective amount of an active agent to an individual in need of pain treatment, said active agent comprises contulakin-G which comprises the amino acid sequence Xaa_1-Ser-Glu-Glu-Gly-Gly-Ser-Asn-Ala-Thr-Lys-Lys-Xaa_2-Tyr-Ile-Leu (SEQ ID NO:1), where Xaa_1 is pyro-Glu, Xaa_2 is proline or hydroxyproline and Thr_{10} is modified to contain an O-glycan.

Claim 2 (original): The method of claim 1, wherein said pain is acute pain.

Claim 3 (original): The method of claim 2, wherein said acute pain is post-trauma.

Claim 4 (original): The method of claim 1, wherein said pain is chronic pain.

Claim 5 (original): The method of claim 4, wherein said chronic pain results from cancer.

Claim 6 (original): The method of claim 4, wherein said chronic pain is neuropathic pain.

Claim 7 (original): The method of claim 4, wherein said chronic pain is inflammatory.

Claim 8 (original): The method of claim 1, wherein the active agent is administered using a delivery system selected from the group consisting of infusion, pump delivery, bioerodable polymer delivery, microencapsulated cell delivery, injection and macroencapsulated cell delivery.

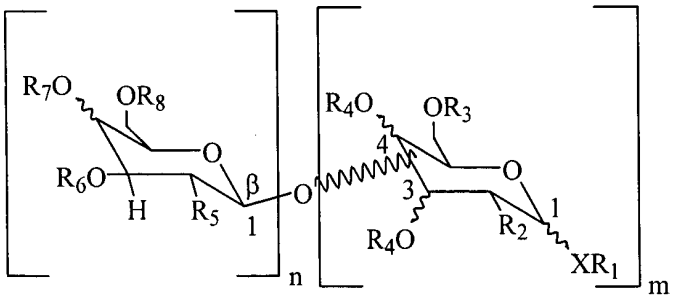
Claim 9 (original): The method of claim 8, wherein administration is into the central nervous system.

Claim 10 (original): The method of claim 9, wherein the central nervous system is selected from the group consisting of the intrathecal space, the brain ventricles and the brain parenchyma.

Claim 11 (original): The method of claim 8, wherein the administration is selected from the group consisting of subcutaneous, intravenous, intra-arterial and intramuscular.

Claim 12 (original): The method of claim 1, wherein the glycan is Gal(β1→3)GalNAc(α1→).

Claim 13 (original): The method of claim 1, wherein the glycan has the structure



wherein R_1 is Thr; X is O; R_2 is OH, NH_2, $NHSO_3Na$, NHAc, O-sulphate, O-phosphate, or O-glycan; R_3 is H, SO_3, PO_3, acetyl, sialic acid or monosaccharide; R_4 is H, SO_3, PO_3, acetyl or monosaccharide; R_5 is OH, NH_2, $NHSO_3Na$, NHAc, O-sulphate, O-phosphate, O-monosaccharide or, O-acetyl; R_6 is H, SO_3, PO_3, acetyl or monosaccharide; R_7 is H, SO_3, PO_3, acetyl or monosaccharide; R_8 is H, SO_3, PO_3, acetyl or monosaccharide; n is 0-4 and m is 1-4.

Claim 14 (currently amended): A method for treating pain in an individual which comprises administering an analgesic effective amount of an active agent to an individual in need of pain treatment, said active agent is selected from the group consisting of

(a) a generic contulakin-G having the following general formula Xaa_1-Xaa_2-Xaa_3-Xaa_3-Gly-Gly-Xaa_2-Xaa_4-Xaa_5-Xaa_6-Xaa_7-Xaa_8-Xaa_9-Xaa_{10}-Ile-Leu (SEQ ID NO:2), where Xaa_1 is pyro-Glu, Glu, Gln or γ-carboxy-Glu; Xaa_2 is Ser, Thr or S-glycan modified Cys; Xaa_3 is Glu or γ-carboxy-Glu; Xaa_4 is Asn, N-glycan modified Asn or S-glycan modified Cys; Xaa_5 is Ala or Gly; Xaa_6 is Thr, Ser, S-glycan modified Cys, Tyr or any hydroxy containing unnatural amino aicd; Xaa_7 is Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys, Arg, ornithine, homoarginine or any unnatural basic amino acid; Xaa_8 is Ala, Gly, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys, Arg, ornithine, homoarginine, any unnatural basic amino acid or X-Lys where X is $(CH_2)_n$, phenyl, $-(CH_2)_m-(CH=CH)-(CH_2)_mH$ or $-(CH_2)_m-(C\equiv C)-(CH_2)_mH$ in which n is 1-4 and m is 0-2; Xaa_9 is Pro or hydroxy-Pro; and Xaa_{10} is Tyr, mono-iodo-Tyr, di-iodo-Tyr, O-sulpho-Tyr, O-phospho-Tyr, nitro-Tyr, Trp, D-Trp, bromo-Trp, bromo-D-Trp, chloro-Trp, chloro-D-Trp, Phe, L-neo-Trp, or any unnatural aromatic amino acid, with the proviso that the generic contulakin-G is not ~~un-glycosylated~~ de-glycosylated contulakin-G;

(b) a generic contulakin-G of (a) which is modified to contain an O-glycan, an S-glycan or an N-glycan;

(c) a contulakin-G analog which comprises an N-terminal truncation of from 1 to 9 amino acids of the generic contulakin-G of (a);

(d) a contulakin-G analog of (c), wherein a Ser-O-glycan, Thr-O-glycan or Cys-S-glycan is substituted for the amino acid residue at the truncated N-terminus;

(e) a contulakin-G analog, wherein a Ser-O-glycan, Thr-O-glycan or Cys-S-glycan is substituted for a residue at positions 1-9 of the generic contulakin-G of (a); and

(f) a contulakin-G analog which comprises an N-terminal truncation of 10 amino acids of the generic contulakin-G of (a) which is further modified to contain a Lys-N-glycan at residue 11 of the generic contulakin-G.

Claim 15 (original): The method of claim 14, wherein said pain is acute pain.

Claim 16 (original): The method of claim 15, wherein said acute pain is post-trauma.

Claim 17 (original): The method of claim 14, wherein said pain is chronic pain.

Claim 18 (original: The method of claim 17, wherein said chronic pain results from cancer.

Claim 19 (original): The method of claim 17, wherein said chronic pain is neuropathic pain.

Claim 20 (original): The method of claim 17, wherein said chronic pain is inflammatory.

Claim 21 (original): The method of claim 14, wherein the active agent is administered using a delivery system selected from the group consisting of infusion, pump delivery, bioerodable polymer delivery, microencapsulated cell delivery, injection and macroencapsulated cell delivery.

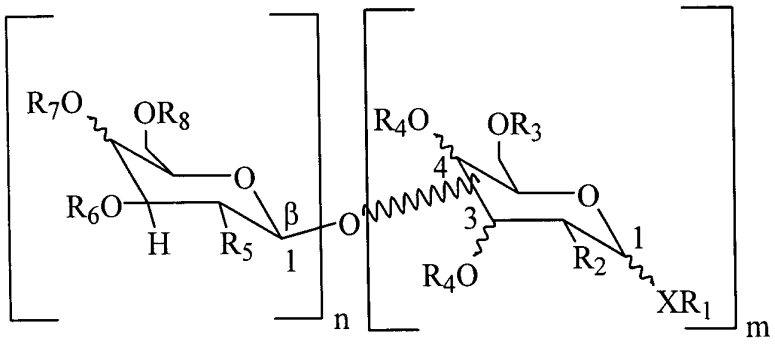
Claim 22 (original): The method of claim 21, wherein administration is into the central nervous system.

Claim 23 (original): The method of claim 22, wherein the central nervous system is selected from the group consisting of the intrathecal space, the brain ventricles and the brain parenchyma.

Claim 24 (original): The method of claim 21, wherein the administration is selected from the group consisting of subcutaneous, intravenous, intra-arterial and intramuscular.

Claim 25 (original): The method of claim 14, wherein the glycan is Gal(β1→3)GalNAc(α1→).

Claim 26 (original): The method of claim 14, wherein the glycan has the structure



wherein R_1 is Thr, Ser, Cys, Asn or Lys; X is O when R_1 is Thr or Ser, or X is S when R_1 is Cys or X is N when R_1 is Asn or Lys; R_2 is OH, NH_2, $NHSO_3Na$, NHAc, O-sulphate, O-phosphate, or O-glycan; R_3 is H, SO_3, PO_3, acetyl, sialic acid or monosaccharide; R_4 is H, SO_3, PO_3, acetyl or monosaccharide; R_5 is OH, NH_2, $NHSO_3Na$, NHAc, O-sulphate, O-phosphate, O-

monosaccharide or, O-acetyl; R_6 is H, SO_3, PO_3, acetyl or monosaccharide; R_7 is H, SO_3, PO_3, acetyl or monosaccharide; R_8 is H, SO_3, PO_3, acetyl or monosaccharide; n is 0-4 and m is 1-4.